



AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of generating a transmission signal comprising a carrier signal, the method comprising the step of multiplying the carrier signal by at least one subscriber modulation signal; wherein the at least one subscriber modulation signal comprises a number, m, of amplitude levels, where $m > 2$ ~~combining a plurality of subcarrier modulation signals with the carrier signal.~~

Claims 2-3 (Canceled).

4. (Currently Amended) A method as claimed in claim 1, wherein ~~either of claims 2 and 3 in which~~ m is selected from at least one of 3, 4, 5, 6, 7, 8 or 9.

5. (Currently Amended) A method as claimed in claim 1, wherein ~~any of claims in which~~ at least one of the plurality of subcarrier modulation signals approximates or is derived from a predeterminable basis waveform.

6. (Currently Amended) A method as claimed in claim 5 in which the basis waveform is at least one of a sine wave, cosine wave, or triangular waveform.

7. (Currently Amended) A method as claimed in claim ~~either of claims 5 and 6 in which~~ wherein the basis waveform is selected according to desired power distribution characteristics of the transmission signal.

8. (Currently Amended) A method as claimed in claim 1, wherein the at least one subcarrier modulation signal comprises ~~any preceding claim in which~~ at least two mutually orthogonal ~~of the plurality of subcarrier modulation signals are mutually orthogonal.~~

9. (Canceled).

10. (Currently Amended) A method as claimed in claim 8, wherein ~~any preceding claim in which~~ the at least two ~~plurality of~~ subcarriers comprises a pair of subcarriers having a predetermined phase relationship.

11. (Currently Amended) A method as claimed in claim 1, wherein ~~any preceding claim in which the at least one plurality~~ of subcarriers comprises an in-phase subcarrier and a quadrature phase subcarrier.

12. (Original) A method as claimed in claim 11 further comprising the step of determining the respective multiple amplitudes of the in-phase and quadrature phase subcarriers to maintain a substantially constant transmission signal envelope.

13. (Currently Amended) A method as claimed in claim 1, any preceding claim further comprising the steps of deriving the amplitudes associated with the at least one ~~a pair of orthogonal~~ subcarriers from a plurality of phase states.

14. (Original) A method as claimed in claim 13, in which the phase states are equally angularly distributed around a unit circle.

15. (Currently Amended) A method as claimed in claim 1, wherein ~~any of claims 2 to 14 in which~~ durations of the amplitudes of the at least one subcarrier are substantially equal.

16. (Currently Amended) A method as claimed in claim 1, wherein ~~any of claims 2 to 14 in which~~ the durations of the at least a pair of amplitudes of the at least one subcarrier are different.

17. (Currently Amended) A method as claimed in claim 15, wherein ~~any of claims 2 to 16 in which~~ the durations are ~~be~~ quantised according to an associated clock signal.

18. (Currently Amended) A method as claimed in claim 1, wherein ~~any preceding claim in which~~ at least a pair of ~~the plurality of~~ subcarriers cooperate to define an associated plurality of phase states resolved according to mutually orthogonal axes.

19. (Currently Amended) A method as claimed in claim 18, wherein ~~any preceding claim in which~~ the plurality of phase states is associated with respective ranging signals.

20. (Currently Amended) A method as claimed in claim ~~either of claims 18 and 19, in which~~ wherein, dwell times in at least some of the plurality of phase states are unequal.

21. (Currently Amended) A method as claimed in claim ~~any of claims 18 to 20 in which~~ wherein, a first group of the phase states have a first dwell and a second group of the phase states have a second dwell time.

22. (Currently Amended) A method as claimed in claim ~~any of claims 18 to 21 in which~~ wherein the dwell times are quantised according to a clock.

23. (Currently Amended) An m-level subcarrier modulation signal comprising m signal amplitudes, where $m > 2$, for modulating a first signal.

24. (Currently Amended) A signal as claimed in claim 23, wherein the plurality of signal amplitudes are associated with, or derived from, a plurality of phase states associated at least the m-level subcarrier modulation signal and, ~~preferably~~, a second signal.

25. (Currently Amended) A signal as claimed in claim 24 in which the second signal has a predetermined phase relationship with the m-level subcarrier modulation signal.

26. (Original) A signal as claimed in claim 25 in which the predetermined phase relationship is a quadrature phase relationship.

27. (Currently Amended) A signal as claimed in claim ~~any of claims 23 to 26 in which~~, wherein the m signal amplitudes comprises amplitudes representing a quantised sinusoidal signal.

28. (Currently Amended) A signal as claimed in ~~any of claims 23 to 27 in which~~ wherein, the m signal amplitudes are, or are in proportion to, at least one of the following sets of amplitudes $\{+1, +1/\sqrt{2}, 0, -1/\sqrt{2}, -1\}$, $\{-\sqrt{3}/2, -1/2, +1/2, +\sqrt{3}/2\}$, $\{\pm\sin(67.5^\circ), \pm\sin(22.5^\circ), \pm\sin(22.5^\circ), \pm\sin(67.5^\circ)\}$, $\{\pm\cos(67.5^\circ), \pm\cos(22.5^\circ), \pm\cos(22.5^\circ), \pm\cos(67.5^\circ)\}$.

29. (Original) A signal as claimed in claim 28 wherein the signal amplitudes are selected to achieve a predetermined magnitude characteristic in a transmitted signal.

30. (Original) A signal as claimed in claim 29 in which the predetermined magnitude characteristic is a substantially constant envelope of the transmitted signal.

Claims 31-95 (Canceled).

96. (Currently Amended) A receiver system comprising means to process a signal as claimed in claim ~~any of claims 23 to 43~~.

97. (Currently Amended) Computer readable storage comprising computer executable code for implementing ~~or producing a method, signal or system~~ as claimed in ~~any preceding~~ claim 1.